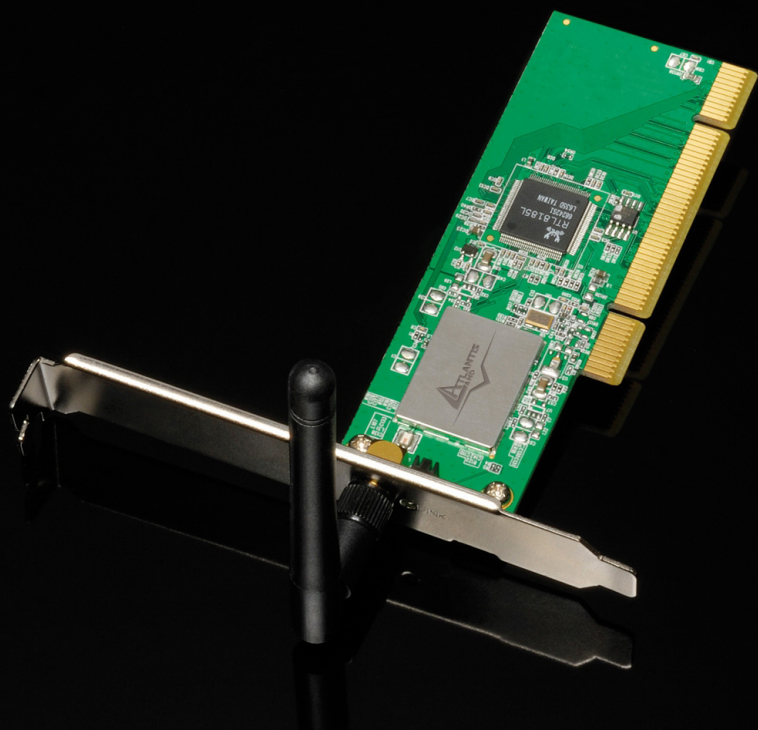




NetFly PCI 54 Wireless PCI Adapter



USER MANUAL

A02-PCI-W54(V1.1)_ME01

Where solutions begin



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Wireless LAN, Health and Authorization for use

Radio frequency electromagnetic energy is emitted from Wireless LAN devices. The energy levels of these emissions however are far much less than the electromagnetic energy emissions from wireless devices like for example mobile phones. Wireless LAN devices are safe for use frequency safety standards and recommendations. The use of Wireless LAN devices may be restricted in some situations or environments for example:

- On board of airplanes, or
- In an explosive environment, or
- In case the interference risk to other devices or services is perceived or identified as harmful

In case the policy regarding the use of Wireless LAN devices in specific organizations or environments (e.g. airports, hospitals, chemical/oil/gas industrial plants, private buildings etc.) is not clear, please ask for authorization to use these devices prior to operating the equipment.

Regulatory Information/disclaimers

Installation and use of this Wireless LAN device must be in strict accordance with the instructions included in the user documentation provided with the product. Any changes or modifications made to this device that are not expressly approved by the manufacturer may void the user's authority to operate the equipment. The Manufacturer is not responsible for any radio or television interference caused by unauthorized modification of this device, of the substitution or attachment. Manufacturer and its authorized resellers or distributors will assume no liability for any damage or violation of government regulations arising from failing to comply with these guidelines.

CE Mark Warning

This is a Class B product. In a domestic environment, this product may cause radio interference, in which case the user may be required to take adequate measures.

CE in which Countries where the product may be used freely:

Germany, UK, Italy, Spain, Belgium, Netherlands, Portugal, Greece, Ireland, Denmark, Luxembourg, Austria, Finland, Sweden, Norway and Iceland.

France: except the channel 10 through 13, law prohibits the use of other channels.

CE/EMC Restriction of Liability

The product described in this handbook was designed, produced and approved according to the EMC-regulations and is certified to be within EMC limitations.

If the product is used in an uncertified PC, the manufacturer undertakes no warranty in respect to the EMC limits. The described product in this handbook was constructed, produced and certified so that the measured values are within EMC limitations. In practice and under special circumstances, it may be possible, that the product may be outside of the given limits if it is used in a PC that is not produced under EMC certification. It is also possible in certain cases and under special circumstances, which the given EMC peak values will become out of tolerance. In these cases, the user himself is responsible for compliance with the EMC limits.

Declaration of Conformity

This equipment has been tested and found to comply with Directive 1999/5/CE of the European Parliament and of the Council on radio equipment and telecommunications terminal equipment and the mutual recognition of their conformity. After assessment, the equipment has been found to comply with the following standards: EN 300.328 (radio), EN 301 489-1, EN 301 489-17 (electromagnetic compatibility) and EN 60950 (safety). This equipment may be used in all European Union countries and in all countries applying Directive 1999/5/CE, without restriction, with the exception of the following countries:

France: When this equipment is used outdoors, output power is limited to within the frequency bands listed on the chart. For more info, consult the website www.art-telecom.fr.

Location	Frequency Band (MHz)	Power (EIRP)
Indoor (no restriction)	2400-2483,5	100mW(20dBm)



Outdoor	2400-2454	100mW(20dBm)
	2454-2483,5	10mW(10dBm)

Italy: For more info, consult the website www.comunicazioni.it

1. INTRODUCTION

Congratulations on your purchase of this NetFly PCI 54 Wireless Adapter. This manual helps to get familiar with the NetFly PCI 54 Wireless Adapter. This manual contains detailed instructions in operation of this product. Please keep this manual for future reference.

With a Wireless LAN Adapter, a laptop computer or a station can communicate with another computer in a wireless way. Easy-to-use utilities are bundled with Wireless LAN Adapter for configuration, monitoring, and diagnosis purposes.

Wireless LAN Adapter can wirelessly transmit and receive data, with the Wireless LAN Adapter, you can locate your Notebook PC or station wherever you want without wires and cables.

Wireless LAN Adapter provides users with an access to real-time information anywhere in their organization. The mobility provides productivity and service, which are not available under wired networks. The Wireless LAN Adapter configuration is easy to change from peer-to-peer networks, suitable for a small number of users, to full infrastructure networks of thousands of users that allow roaming around a broad area.

2. UNPACKING AND SETUP

This chapter provides unpacking and setup information for the NetFly PCI 54 Wireless Adapter.

2.1 Unpacking

Open the box of the NetFly PCI 54 Wireless Adapter and carefully unpack it. The box should contain the following items:

- One NetFly PCI 54 Wireless Adapter
- One Driver & Utility with User's Guide CD-ROM
- One detachable dipole antenna (R-SMA connector)
- One MultiLanguage Quick Start Guide

If any item is found missing or damaged, please contact your local reseller for replacement.

2.2 Setup

The setup of the Wireless LAN Adapter can be performed using the following steps:

- Visually inspect the CardBus/PCI Adapter and make sure that it is fully plugged in to the CardBus/PCI slot.

- Make sure that there is a well environment that there is no much intrusion to have a better connection.

3. HARDWARE INSTALLATION

3.1 LED Indicator

Link

The Link LED indicator lighted green when the NetFly PCI 54 Wireless Adapter is connected to wireless network successfully.

3.2 Check the installation

The LEDs of the Wireless LAN Adapter are clearly visible and the status of the network link can be seen instantly:

1. Once the device is plugged to the station's CardBus/PCI slot, the LED of the Wireless LAN Adapter will light up indicating a normal status.
2. When the device plugged to the station's CardBus/PCI slot and the driver was installed, the ACT will start alternate blinking, it means that the device is starting to scan the wireless devices near the Wireless LAN Adapter.
3. While the Wireless LAN Adapter linked up and transmitting data to the Access Point or to other Wireless LAN station, the Link LED will lighted green.

4. SOFTWARE INSTALLATION

This section will lead you to install the driver and utility of the Wireless LAN Adapter.

4.1 Utility and Driver Installation for Windows

1. Insert the CD-ROM and the Auto-run program will appear. Alternatively, open a file browser and double click on the autorun.exe file located in the CD directory. In some specific setting on Windows system, you may need to proceed the software manually, go to your Windows Start menu and choose Run, type "**D:\PCI\Vista\Setup.exe**" or "**D:\PCI\XP2K\Setup.exe**" in the dialog box and click OK.





Note: (D:\ will depends on where the CD-ROM drive is located and <Windows OS> will depend on the Windows OS you are using).

- If you need to install the driver manually, refer each Windows OS to the following CD-Rom directory path: D:\Driver\.
Note: (D:\ will depends on where the CD-ROM drive is located and <Windows OS> will depend on the Windows OS you are using).
- Click on “**A02-PCI-W54**” icon to select NetFly PCI 54 Home Page.
- Select “**XP / 2K/ ME / 98**” or “**Vista**”, depending on your operating system, and the install wizard will begin installing the software. Follow the install wizard instructions to complete the installation.
- Follow the Install Shield Wizard Instructions. Click “**Next**” to continue and finish it.

The installation program will help you to setup the Wireless LAN utility.

Be noted that the Windows XP have its own Wireless Utility; you can either use the utility of Windows XP or the provided utility.

When the Wireless LAN Adapter was installed, you will see the icon on the Windows task bar. The user can configure the wireless settings using the Wireless Adapter Configuration Utility. Double-click the utility icon that appears in the taskbar

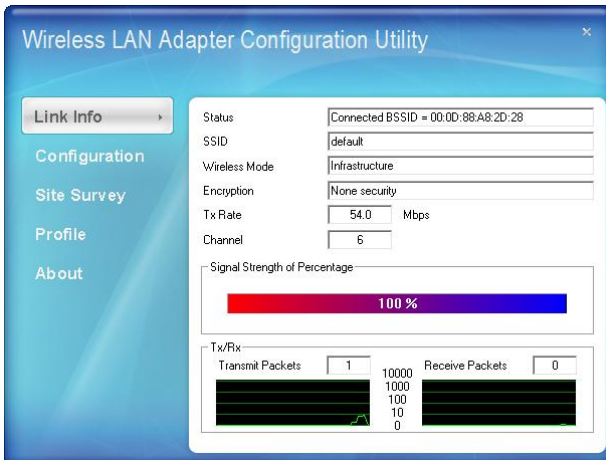
Icon	Quality of Signal
	Excellent
	Good
	Waiting connection
	Not connected

When the icon in the toolbar represents in full green color then the signal strength has an excellent performance with the AP, if it represents in yellow color then the signal strength has a fair performance with the AP, and if the icon represents no color, then the signal strength has a worst performance with the wireless station.

5. WINDOWS VISTA WIRELESS UTILITY SETTING

5.1 Link Information

This is the default screen after launching the Utility program.



Status: Shows the associated BSSID, which can be used to identify the wireless access point.

SSID: Shows the current SSID, which must be the same on the wireless client and AP in order for communication to be established.

Wireless Mode: Shows the current wireless mode used for wireless communication.

Encryption: Shows the current encryption mode used on the wireless network.

Tx Rate: Shows the current data rate used for transmitting.

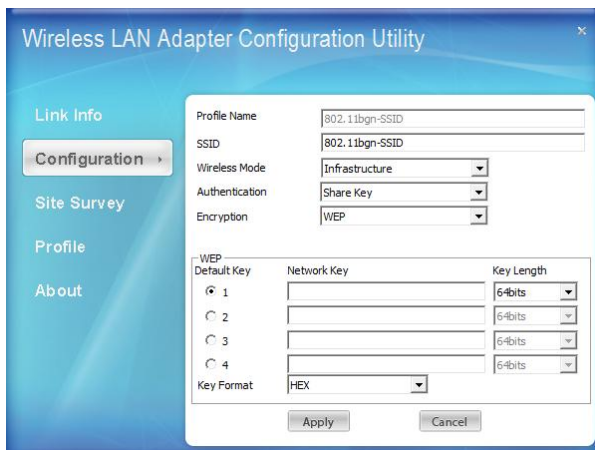
Channel: Shows the current channel for communication.

Signal Strength of Percentage: Shows the wireless signal strength of the connection between the Wireless LAN USB 2.0 Adapter with the Access Point.

TX/RX: Shows the statistics of data transfer, and the calculation is based on the number of packets transmitted and received. It also shows the link quality of the Wireless LAN USB 2.0 Adapter with the Access Point when operation under Infrastructure mode.

5.2 Configuration

This screen is where you set the basic wireless settings for the Wireless LAN USB 2.0 Adapter.



WEP	Default Key	Network Key	Key Length
<input checked="" type="radio"/>	1		64bits
<input type="radio"/>	2		64bits
<input type="radio"/>	3		64bits
<input type="radio"/>	4		64bits

Profile Name: The default name is the same as the SSID of the platform which you connected and you can change the name you favor(the key length is limited 1~32 bits).

SSID: Service Set Identifier, which is a unique name shared among all client in a wireless network. The SSID must be identical for client in the wireless network.

Wireless Mode: There are two modes available for selection

- Infrastructure –to establish wireless communication with the LAN and other wireless client through the use of Access Points.
- Ad-Hoc – to establish point- to-point wireless communication directly with other wireless client device.

Authentication: The following options are available:

- Open System
- Shared key
- WPA-PSK
- WPA2-PSK
- WPA EAP-TLS
- WPA2 EPA-TLS

Select **Open System, Shared Key** for WEP data encryption feature.

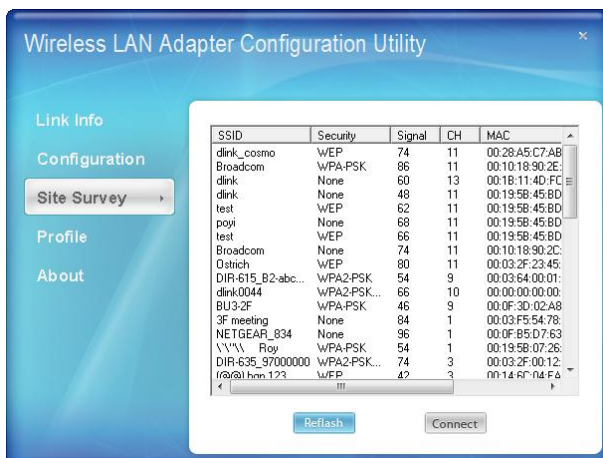
Open System and **Shared Key** require the users to set a WEP key to exchange data with other wireless clients that have the same WEP key.

The following will only be activated when Open, Shared Key is enabled:

- **Default Key:** select one of the 4 keys to use.
- **Network Key:** choose the encryption way, either in HEX or ASCII formats, and enter the password in the blank space.
- **Key Length:** select 64 or 128 bits as the length of the keys.
- **Key Format:** HEX or ASCII
- **WPA-PSK/ WPA2-PSK:** This Passphrase must be the same on each computer that is connected to the wireless network.
- **WPA/ WPA2:** Please click the “Certificate” button. Then, please select the certificate that user wants to use
- **Encryption:** Select the encryption type for TKIP or AES encryption type.

5.3 Site Survey

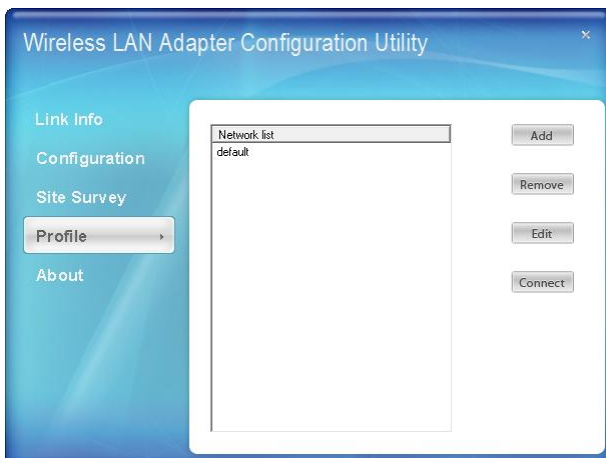
This screen displays the wireless networks (wireless clients and Access Points) that are within range and it also allows the user to establish wireless communications with an available wireless network.



Select any one of the wireless networks by double-clicking on it or clicking on the **“Connect”** button.

5.4 Profile

The user can create and manage the created profiles for home, work or public areas. By double-clicking on one of the created profile, the setting will adjust to the specific setting such as SSID, channel, and encryption as saved by that particular profile.



Add: Adds a profile. The following screen will appear. The user can enter the necessary information required for accessing Access Points or Wireless Router.

Remove: Deletes the selected profile

Edit: To view and change its settings of the profile.

Connect: The current connected profile information

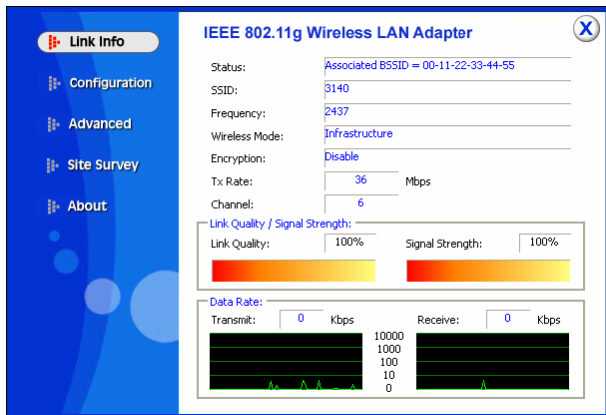
5.5 About

This screen displays information about the NetFly PCI 54 Wireless Adapter, such as the Driver and Utility version. When a new version of the utility becomes available for upgrade, users will be able to identify by version numbers.

6. WINDOWS XP/2000/ME/98 WIRELESS UTILITY SETTING

6.1 Link Information

The default page is as below after launching the Utility program.



Status: Shows the associated BSSID, which can be used to identify the wireless network.

SSID: Shows the current SSID, which must be the same on the wireless client and AP in order for communication to be established.

Frequency: Shows the current frequency used for wireless network.

Wireless Mode: Shows the current wireless mode used for wireless communication.

Encryption: Shows the current encryption mode used for wireless network.

TxRate: Shows the current data rate used for transmitting.

Channel: Shows the current channel for communication.

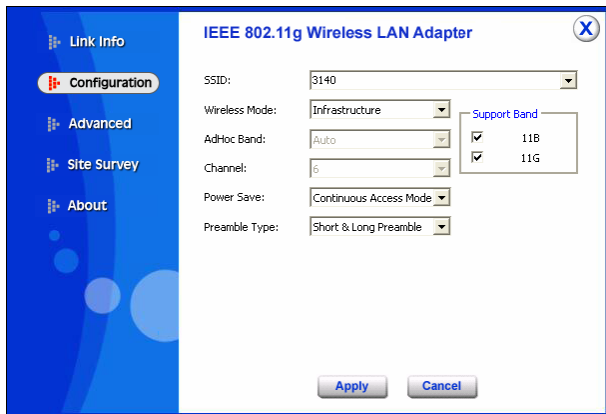
Link Quality: Shows the link quality of the wireless LAN adapter with the Access Point when operating under Infrastructure mode.

Signal Strength: Shows the wireless signal strength of the connection between the wireless LAN adapter card with the Access Point.

Data Rate: Shows the statistics of data transfer, and the calculation is based on the number of packets transmitted and received.

6.2 Configuration

This screen is where changes the basic wireless settings for the wireless LAN adapter with the minimum amount of effort to implement a secure wireless network environment.



SSID: Service Set Identifier, which is a unique name shared among all clients and nodes in a wireless network. The SSID must be identical for each clients and nodes in the wireless network.

Wireless Mode: There are two types available for selection

- Infrastructure – to establish wireless communication with LAN and other wireless clients through the use the Access Points.
- Ad-Hoc – to establish point-to-point wireless communication directly with other wireless client devices such as wireless network PCI Adapter.
 - **AdHoc Band:** When using Wireless Mode for Ad-Hoc mode, select the AdHoc Band from drop down list for 11b only, 11g only or Auto for both of 11b and 11g.
 - **Channel:** The channel the AP operates on. The channel range of 1 to 11 for North America (FCC) domain and 1 to 13 for European (ETSI) domain and 1 to 14 for Japanese domain.

WARNING: Country domain can't be choose by enduser, because the incorrect region may be in violation of applicable laws.

Power Mode: There are 3 modes to choose from.



- Continuous Access Mode (default) – the wireless LAN adapter is constantly operating with full power. This mode consumes the most power.
- Maximum Power Save – the wireless LAN adapter consumes the least power. This mode only operates when there is wireless network activity.
- Power Save – the wireless LAN adapter consumes moderate level of power.

Preamble Type: Select Long or Short Preamble type.

Preamble is a sequence of bits transmitted at 1Mbps that allows the PHY circuitry to reach steady-state demodulation and synchronization of bit clock and frame start. Two different preambles and headers are defined: the mandatory supported Long Preamble and header, which interoperate with the 1 Mbit/s and 2 Mbit/s DSSS specification (as described in IEEE Std 802.11), and an optional Short Preamble and header (as described in IEEE Std 802.11b). At the receiver, the Preamble and header are processed to aid in demodulation and delivery of the PSDU. The Short Preamble and header may be used to minimize overhead and, thus, maximize the network data throughput. However, the Short Preamble is supported only from the IEEE 802.11b (High- Rate) standard and not from the original IEEE 802.11. That means that stations using Short-Preamble cannot communicate with stations implementing the original version of the protocol. Click “Apply” for the changes to take effect.

Support Band: There are two modes the user can select, including 11B and 11G. The default setting is 11B and 11G are enabled, which is interoperable with both 11B and 11G devices.

Note: user must select one of 11B or 11G at least; otherwise the wireless connection will not function.

6.3 Advanced

This screen is where you configure the Security settings for the NetFly PCI 54 Wireless Adapter.

The screenshot shows the configuration window for the IEEE 802.11g Wireless LAN Adapter. The 'Advanced' tab is selected in the left sidebar. The main area contains the following settings:

- Auth Mode:** A dropdown menu set to 'Disable'. A 'Configuration' button is to its right.
- Encryption:** A dropdown menu set to 'WEP-Key'.
- WEP Key Table:** A table with 4 rows and 3 columns: WEP Key, Network Key, and Key Length.

WEP Key	Network Key	Key Length
1	<input type="text"/>	64bits
2	<input type="text"/>	64bits
3	<input type="text"/>	64bits
4	<input type="text"/>	64bits
- Default Key:** A dropdown menu set to 'Key 1'.
- Format:** A dropdown menu set to 'Hex'.
- Buttons:** 'Apply' and 'Cancel' buttons at the bottom.

Auth Mode: Select the authentication type from drop down list for:

- Disable
- Open System
- Shared Key
- WPA
- WPA-PSK
- WPA2
- WPA2-PSK

6.3.1 Open System / Shared Key

Two side-by-side screenshots of the IEEE 802.11g Wireless LAN Adapter configuration window, showing different authentication modes. Both screenshots have the 'Advanced' tab selected.

- Left Screenshot:** 'Auth Mode' is set to 'Open System'. The 'Encryption' dropdown is set to 'WEP-Key'. The 'WEP Key' table and other settings are identical to the main screenshot above.
- Right Screenshot:** 'Auth Mode' is set to 'Shared Key'. The 'Encryption' dropdown is set to 'WEP-Key'. The 'WEP Key' table and other settings are identical to the main screenshot above.

WEP Key 1~4: choose the encryption way, either in HEX or ASCII formats, and enter the password in the blank space.

Key Length: select 64 or 128 bits as the length of the keys. If you select 64bit in Hex format, you must type 10 values in the following range (0~F, hexadecimal), or 64bit in ASCII format, you must type 5 values in the following range (0~9, A~Z and a~z Alphanumeric); If you select 128bit in Hex format, you must type 26 values (0~F, hexadecimal), or 128bit in ASCII format, you must type 13 values in the following range (0~9, A~Z and a~z Alphanumeric).

Default Key: select one of the 4 keys to use.

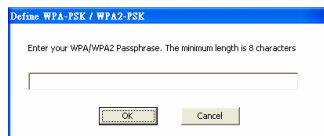
Key Format: ASCII or HEX.

6.3.2 WPA-PSK / WPA2-PSK



If WPA-PSK or WPA2-PSK is selected, the above screen is shown.

Please select the encryption type from drop down menu and press **Configuration** button to configure the passphrase key.

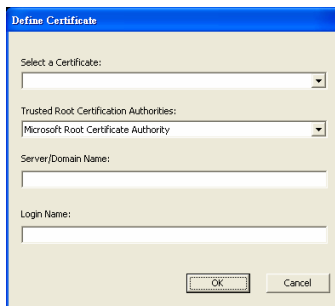


Encryption: Select the encryption type for TKIP or AES encryption type.

6.3.3 WPA / WPA2



If WPA or WPA2 is selected, the above screen is shown. Please select the encryption type from drop down menu and press Configuration button to configure parameters for the RADIUS server.

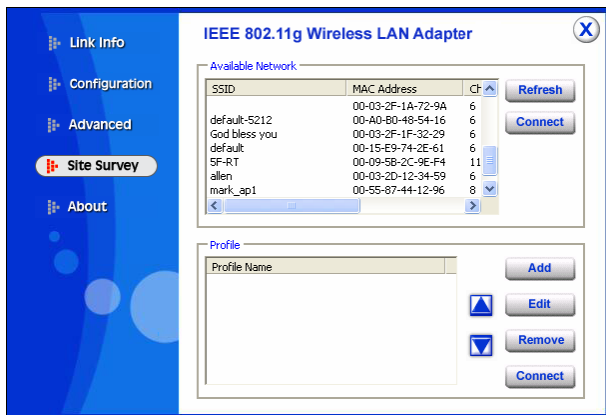


Encryption: Select the encryption type for TKIP or AES encryption type.

WARNING: WPA, WPA2 don't support In Windows 98/ME .

6.4 Site Survey

This screen allows user to scan for available wireless networks (wireless clients and Access Points). It also allows the user to establish wireless communications with an available wireless network.



Available Network: displays the wireless networks (wireless clients and Access Points) that are in signal range.

Select any one of them to establish communications by simply mouse double-click or click on the “Connect” button.

Click “Refresh” button to start scanning for available network again.

Profile: The user can create and manage the created profiles for home, work or public areas. By double-clicking on one of the created profile, the setting will adjust to the specific setting such as SSID, channel, and WEP as saved by that particular profile.

Add: Adds a profile. Then, the following screen would appear. User can enter the necessary information required for accessing Access Points or Wireless Router.

Edit: To view and change its settings of the profile.

Remove: Deletes the selected profile

Connect: The current connected profile information.

6.5 About

This screen displays information about the NetFly PCI 54 Wireless Adapter, such as the Driver and Utility version. When a new version of the utility for upgrade, users will be able to identify by version numbers.

APPENDIX A: Technical Specifications

General	
Radio Technology	IEEE 802.11b Direct Sequence Spread Spectrum (DSSS) IEEE 802.11g Orthogonal Frequency Division Multiplexing (OFDM)
Interface	32-bit PCI bus
Data Transfer Rate	1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, 54Mbps
Receiver Sensitivity	54Mbps: Typical -70dBm @ 10% PER (Packet Error Rate) 11Mbps: Typical -86dBm @ 8% PER (Packet Error Rate)
Transmit Power	802.11b: 15±2dBm 802.11g: 13±2dBm
Frequency Range	2412 ~ 2484 MHz ISM band (channels 1 ~ 14) 2400~2483.5MHz ISM band (channels 1 ~ 11)
Modulation Schemes	DBPSK/DQPSK/CCK/OFDM
Channels	1~13 channels (ETSI)
Media Access Protocol	CSMA/CA with ACK
Security	64/128-bits WEP Encryption, WPA-PSK, WPA2-PSK, WPA, WPA2
Diagnostic LED	Link
Antenna	2dBi dipole antenna

Physical and Environmental	
Driver Support	Windows 98, ME, Windows 2000, Windows XP, Windows Vista
Temperature	Operating: 0° ~ 40° C, Storage: -10° ~ 70° C
Humidity	10% ~ 95% RH, no condensation
Dimensions	13 x 121 x 21.6 mm
Certifications	FCC Part 15.247 for US, ETS 300 328 for Europe,

APPENDIX B: Support

If you have any problems with the NetFly PCI 54, please contact the dealer where you bought this product. If you have any other questions you can contact the Atlantis Land company directly at the following address:

Atlantis Land
Via Pelizza da Volpedo, 59
20092 Cinisello Balsamo (MI) Italy

Tel: +39.(0)2.93906085

Fax: +39.(0)2.93906161

Help Desk :+39.(0)2.93907634

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WWW: www.atlantis-land.com



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